

Appendix 2.

Ecological Reference Worksheet

Author(s) / participant(s): Brenda Simpson, Dan Thomas

Contact for lead author : Brenda Simpson

Reference site used? Yes/No

No

Date: 9/1/2005 MLRA: WP-2 Ecological Site: Swale: WP-2 This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

Indicators: For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for <u>each</u> community within the reference state, when appropriate & (3) site data. Continue description on separate sheet.	Indicator Weight
1. Number and extent of rills : No rills or past evidence.	1
2. Presence of water flow patterns: Flow patterns are few and < 3 feet.	1
3. Number and height of erosional pedestals or terracettes: No terracettes. Pedestals are few and < 1/2 inch. Wind blown deposits in Alkali Sacaton give false appearance of pedestals caused by water erosion.	1
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) : Bare ground is 45%.	1
5. Number of gullies and erosion associated with gullies: No active gullies. Depressions exist from adjacent site runoff, generally < 2 feet deep and vegetated.	1
6. Extent of wind scoured, blowouts and/or depositional areas: No blowouts, very minimal deposition (crowns of Alkali Sacaton), minimal scouring.	1
7. Amount of litter movement (describe size and distance expected to travel) : Litter size is fine to moderately coarse and will travel less than one foot.	1
8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): Soil stability class 4 under plants and class 2 in interspaces.	1
9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) : Surface structure is weak fine granular. A-Horizon color is dark yellowish brown (10YR 4/4) - 0-3 inches thick. SOM is 1.5%.	1
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Dominant plant composition of mixed cool season grasses and warm season grasses are evenly distributed across the site providing adequate protection in normal climatic years and without significant disturbances. Soil infiltration is rated at moderately slow permeability.	1
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): Compaction layer is not present.	1
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>), greater than (>), and equal to (=) : Cool Season Grasses > or equal to Warm Season Grasses >> Shrubs = Forbs.	1
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) : New plants, mature plants, and decadence of old plants is proportional to maintaining the dominant species. Cool and warm season grasses will show normal mortality and decadence.	1
14. Average percent litter cover (18 %) and depth (0-Jan inches). Depth is .75 inches.	1
15. Expected annual production (this is <u>TOTAL</u> above-ground production, not just forage production): Average TOTAL production is rated at 975# per acre per year. Low = 600#. High = 1350#.	1
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate the site": Cholla, Pinyon, and Juniper.	1
17. Perennial plant reproductive capability : All plants are capable of reproduction. The only limitations are weather related or a natural disease affecting reproduction.	1

Photograph (s)

MLRA :

Date :

Ecological Site :

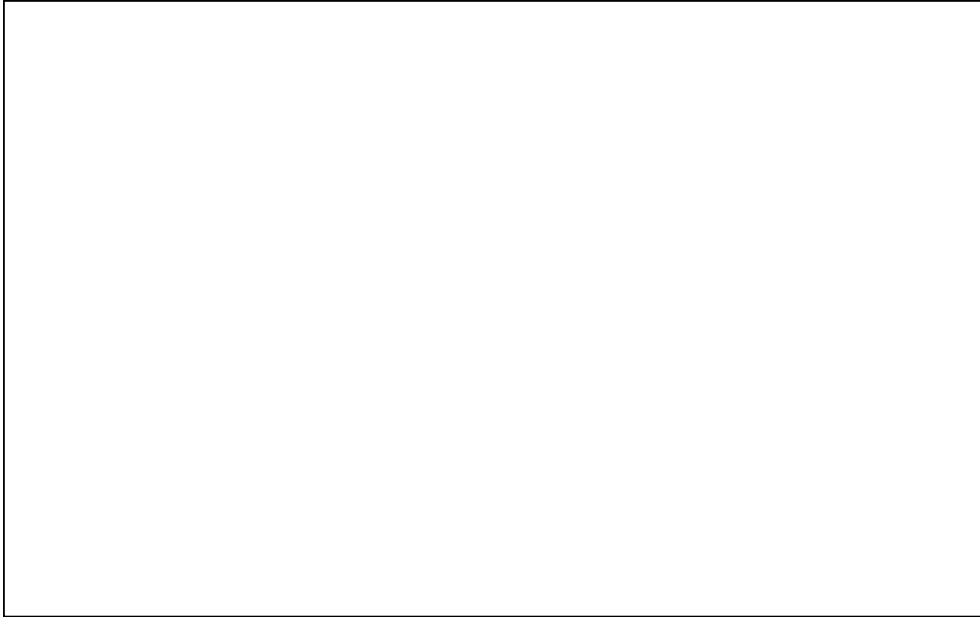


Photo # 1

Comments :

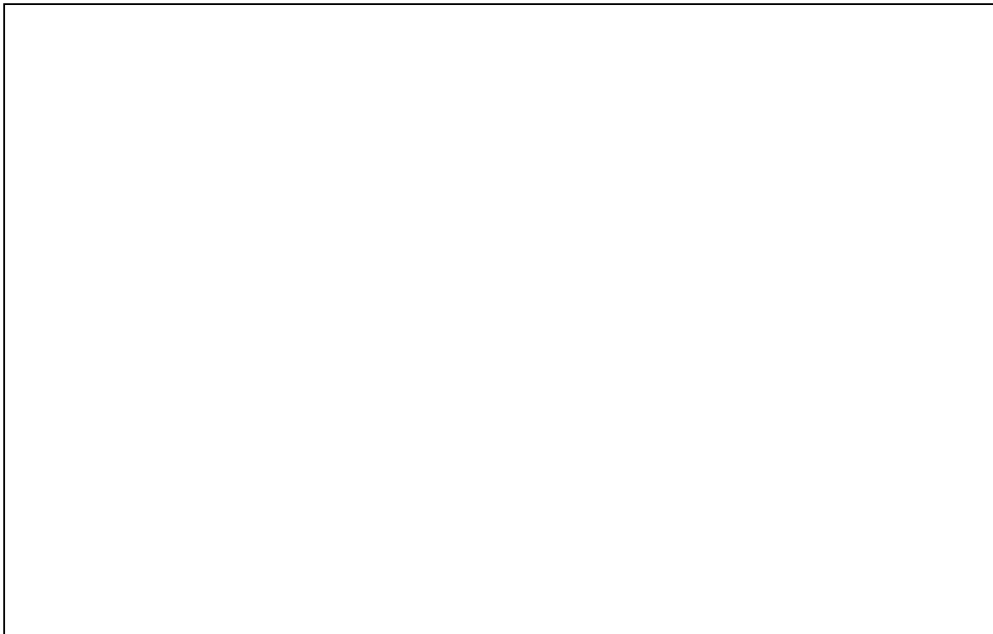


Photo # 2

Comments :

Appendix 4.

Functional / Structural Groups Worksheet

State	<u>New Mexico</u>	Office	<u>Grants FO</u>	Ecological Site	<u>Swale: WP-2</u>
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Observers	Brenda Simpson, Dan Thomas	Date	9/1/05
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Indicate whether each "structural/functional group" is a Dominant (D)(roughly 40-100% composition), a**Sub-dominant (S)** (roughly 10-40%) composition) a**Minor Component (M)** (roughly 20-5% composition), or a**Trace Component (T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual" column) relative to the "Potential" column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust 3 dominance is evaluated solely on cover not composition by weight